

REMARKS

In the Office Action dated April 20, 2005, claims 35, 38, 41-45 and 48-51 were rejected under 35 U.S.C. §102(b) as being anticipated by Yeung. Claims 52, 55, 58-63, 65-67 and 70 were rejected under 35 U.S.C. §102(b) as being anticipated by Reisker et al.

Applicant notes with appreciation that claims 1-34 were allowed, and the remainder of the claims, that were not the subject of the above rejections, were stated to be allowable if rewritten in independent form.

Addressing the rejection based on the Yeung reference first, Applicant respectfully traverses that rejection. Independent claim 35 explicitly states that the antenna rods are substantially parallel to the antenna axis, and further states that the rings each comprise a plurality of radially outwardly projecting connection segments. No corresponding structure is present in the Yeung reference.

The antenna rods 24 in all embodiments of the Yeung reference are clearly curved, and therefore do not proceed parallel to the antenna axis. As can be seen in Fig. 2b of the Yeung reference, although the elements 24 may be curved or bowed in a plane, this only makes the antenna elements coplanar with the center antenna axis, but does not make those elements "parallel" to that axis as set forth in claim 35.

Moreover, although some type of coupling between the elements 24 and the rings 20 and 22 must be made, this is only schematically illustrated in Fig. 2a, and is not described in any further detail in the Yeung reference. As can be seen from Fig. 2b, the connection clearly does not involve a projection extending from the ring 20, since the elements 24 clearly terminate at the exterior surface of the ring 20 in Fig. 2b, as indicated by the uninterrupted (continuous) line representing the outer edge or

surface of the ring 20. Even if there is some type of undisclosed projection from the ring 20 for each of the antenna elements 24 in the Yeung reference, this projection (if it exists) clearly does not alter the spacing of any of the antenna elements 24 with regard to the antenna axis.

The Yeung reference, therefore, does not disclose all of the elements of independent claim 35 as arranged and operating in that claim, and therefore does not anticipate claim 35, nor any of the claims depending therefrom.

As to the Reisker et al reference, independent claim 52 in its original language stated that the combination of the antenna rods and the rings has a frustrum shape. Although the embodiment shown in Fig. 1A of the Reisker et al reference has one ring with a smaller diameter than the other ring, the connecting antenna rods between the rings are clearly curved and do not represent a frustrum shape. Applicant is not aware of any definition of the word "frustrum" that does not mean a frustrum of a cone, and therefore Applicant respectfully submits the arrangement shown in Fig. 1A of the Reisker et al reference does not have a "frustrum shape." Geometrically, a structure either is or is not a frustrum; there is no "in-between" structure. Nevertheless, claim 52 has been amended to use the adjective "conical" to describe the term "frustrum shape." Clearly the arrangement in Fig. 1a of the Reisker et al reference does not have a conical frustrum shape.

Moreover, although a rejection under 35 U.S.C. §103(a) based on Reisker et al was not made, it is clear by the comparison in that reference among Figures 2A, 2B and 2C that the intent of the structure disclosed in the Reisker reference is to be an intermediate structure between the two prior art structures of Figure 2A and Figure 2C. Converting the structure shown in Fig. 2B of the Reisker et al reference

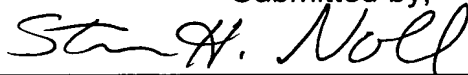
into a structure wherein the connecting antenna rods between the rings are completely straight and not curved, as would be necessary to create a true "conical frustrum shape," would destroy the intended operation of the Reisker reference, and therefore would not be a modification that would be permissible as a basis for a rejection under 35 U.S.C. §103(a).

Claim 52, therefore, is not anticipated by the Reisker et al reference because the Reisker et al reference does not disclose all of the elements of claim 52 as arranged and operating in that claim. None of the claims depending from claim 52 is anticipated by Reisker et al for the same reason.

All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

Typographical errors noted in the specification have been corrected.

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